

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An antenna comprised of a crossed pair of center-fed end-loaded bent-dipole radiators which are structurally embedded into a ~~properly loaded~~ cavity, whereby broadband, dual independent polarized, and hemisphere field-of-view coverage ~~with low RCS characteristics~~ are provided.

2. (Cancel)

3. (Cancel)

4. (New) The antenna of Claim 1, comprising:

a ground plane;

an aperture in the ground plane;

a cavity opened to said aperture and extending below said ground plane;

a bow tie antenna having bow tie elements located in said aperture, the distal ends of said bow tie elements spaced from said ground plane so as to form a slot between the distal end of a bow tie element and said ground plane, said bow tie antenna elements lying in a direction parallel to the plane of the ground plane; and,

a downwardly-depending vertical plate at the distal end of each of said bow tie elements, said vertical plate lowering the low frequency cutoff of said antenna.

5. (New) The antenna of Claim 2, wherein said plate is capacitively coupled to the adjacent bow tie element.
6. (New) The antenna of Claim 2, and further including a second bow tie antenna orthogonal to said first bow tie antenna, said second bow tie antenna having respective downwardly-depending vertical plates at the distal ends of the bow tie elements thereof.
7. (New) The antenna of Claim 2, and further including a second bow tie antenna coplanar with the first bow tie elements of said first-mentioned bow tie antenna and orthogonal thereto in a quad configuration.
8. (New) The antenna of Claim 7, wherein adjacent edges of the bow tie elements of said first and second bow tie antennas define a slot.
9. (New) The antenna of Claim 1, wherein said bent dipole antenna includes a bow tie antenna.
10. (New) The antenna of Claim 9, wherein said bent dipole antenna includes a pair of crossed bow tie antennas.
11. (New) The method of Claim 4, wherein the downwardly depending vertical plate is capacitively coupled to the adjacent bow tie element.

12. (New) The antenna of Claim 1, wherein said antenna is a low-profile electrically small cavity antenna measuring 0.17 x 0.17 x 0.05 wavelengths.

13. (New) A method for decreasing the low frequency cutoff of a broadband, low-observable, conformal antenna embedded in a cavity and having orthogonally-oriented bow tie elements, comprising the step of electrically coupling to the distal ends of the bow tie elements to respective downwardly-depending vertical plates, the plates serving to extend the effective size of the antenna at the low frequency end thereof.

14. (New) A structurally-embedded conformal antenna with a selectively loaded cavity having less than 10% of the cavity volume comprised of absorbing material while still maintaining pattern symmetry.